EXHIBIT B

(Form To Be Filled by the Inventor(s))

November 25, 2002

Tentative No. 19726227

Arrangement No. 418-10250

Title of the Invention: A Communication System That Enables Linkage between the Internet Telephone and Call Exchange Device Storage Terminal

1. Confirmed: Shigeo Fujii, Software Section, Business Network Division, Nippon Electric Company, Limited

Form of Notification: An Explanation of the Invention (Form of the Application, Drawings, Etc.)

Foreign Applications: Desired

Countries Considered: United States of Americas and Australia

Domestic Priority Claim: Not desired

PCT Application shift to Japan: Normal application

Anticipated announcement outside the Company:

No announcement outside the firm.

Delivery of the Product: Normal civilian demand

Related inventions: (If yes, make an input.)

If an application is made in a foreign country, indicate the name of the country.

Kind of the Invention: This is an ordinary invention.

Time for Requesting an Examination: Will be left to the discretion of the Intellectual Property Section.

Regarding the invention mentioned above, I (we) will transfer the right to receive either a patent or a utility model registration on the basis of the Employees' Employment Rules and Regulations of Nippon Electric Company, Limited.

(Form for Manager's Comments) November 26, 2002

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Jurisdiction of the Right:

The actions leading to the invention (black circle) belongs or (white circle) does not belong to either the past or the present job category.

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Relation with the Client: Defense Department, NTT, Ministry of Economics and Industry, JR, NP (National Project). (Translator's Note: All unmarked)

Evaluation of the Invention:

1. Possibility of Regitsration:

More than 80 per cent.

2. Nature of the Idea (Select more than one, if needed):

New Technical Concept

3. Fundamental/Improvement

A Completely fundamental invention.

4. Technical Effect:

Extremely large.

5. Prospect for application

5-1. In trial production. Anticipated delivery date is May 1, 2003.

5-3. Adoption for standard specification. Unclear

6. General use: low

7. Life of the technology: Medium range

8. Possibility of Avoidance: Considerably difficult

9. Confirmation of any infringement: Easy

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Overall Evaluation: A

In dust.

Applications To Be Filed in Foreign Countries:

A. Names of Countries:

United States of Americas
Republic of Korea
China
Britain
Germany
France
The Netherlands
Australia

Product incorporating this invention can be exported to the US.

Manager's Determination:

We are of the opinion that this invention has patentability and, accordingly, we request the process of applications be carried out.

Manager's Name: Kingo Tezuka, Employee Number: 0544269

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Selective Responsible Person's Entry:

Column for Imput by Selective Responsible Person:

To be Classified as S Grade.

Selective Responsible Person:

Name: Kingo Tezuka

Employee No. 0544269

(Title of the Invention) A communication system that enables linkage between the Internet telephone and exchange device terminal.

(Features of the Invention)

This invention makes it possible to construct a telephone system which is highly interchangeable with the conventional communication operations through the use of the terminal that is stored in the Call Exchange Device as a handset for telephoning.

The personal computer 10 shown in Figure 1 comprises a sound input output means 11, means 12 that transmits and receives the internet telephone information through such an internet circuit as LAN, etc. and a software 13 which is required for transmitting and receiving the call control information plus such a call connection control device as the call exchange device 20 (so-called PBX).

In connection with the communications by using the internet telephone shown in Figure 1, it has been customary in the past to dial the number of the other party from a keyboard 14 that is connected to the personal computer 10 or start up the application such as the telephone book, etc., thereby conducting the transmission operation. The communication is carried out by using the handset 15 that is connected to the sound input device. In the case where there is such an inner terminal 21 as the call PHS, for instance, that is stored in the call exchange device 20, this means that the user holds the terminals in double, with a consequence that there are double the internal numbers that are controlled by the call exchange device 20, with a result that both the apparatus and the number management become troublesome to the user.

Nevertheless, the advantage of an internet telephone of the personal computer type lies in the fact that an internet telephone can be easily realized by adding a communication control software 13 to the personal computer 10. By further adding an application to the personal computer 10, it becomes possible to

jointly offer such functions as the determination of the transmitter user from the number information or the joint ownership of the file inside the personal computer, which functions are absent in the conventional internal terminals.

This invention makes it possible to utilize the applications of the internet telephone that is comprised of a personal computer 10, while maintaining the conventional interchangeability of the communication operation by notifying the personal computer 10 about the call control information at the time of the transmission or receiving by using an internal terminal 21 that is stored in the call exchange device 20 for the handset.

(Examples of the Invention)

(Construction of an Example)

Figure 1 shows the construction of a terminal that stores an internet telephone to be utilized and the existing call exchange device. The personal computer 10 comprises an input and output means 11 for the sound, a means 12 that transmits or receives the internet telephone information through such an internet circuit as the LAN, etc. and a software 13 that is required for transmitting to or receiving from such a connection control device as the call exchange device 20 (so-called PBX) the control information.

Figure 2 shows the action involved at the time of a communication by using the personal computer 10. The other party's number is dialed from the keyboard 14 that is connected to the personal computer 10 or the transmission operation is conducted by starting up an application

such as the use of a telephone book, etc.

In the call exchange device 20, the information on the internal terminal 21 which is linked to the personal computer 10 is registered at the rate of 1 : 1. It establishes a communication route between the internal terminal 21 and the transmission request terminal 22 simultaneously with a call connection request to the transmission request terminal 22 at the time when the transmission request from the personal computer 10 has been received by the call exchange device.

Figure 3 shows the action involved at the time when communication is conducted by using the inner terminal 21. The other party's number is inputted by using the dial face of the inner terminal 21 or the transmission application held by said terminal is started up, thereby establishing a connection with the other party. In the call exchange device 20, the information about the personal computer 10 that is linked to the inner terminal 21 is registered at the rate of 1 : 1 in the call exchange device 20 and, at the time when the call exchange device has received a transmission request from the inner terminal 21, a call connection request is carried out to the transmission request terminal 22, thereby establishing a communication route between the inner terminal and the transmission requesting terminal 22 and, at the same time, the connection state with the personal computer 10 is linked.

Figure 4 shows the action involved at the time when a communication arrives for the user who holds the personal computer 10 and the inner terminal 21. The other party's number is inputted by operating the dial face of the inner terminal 22 or the transmission application

held by said terminal is started up, thereby establishjng a connection with the other party. In the call exchange device 20, the information on the personal computer 10 which is linked to the transmission request terminal 21 is registered 1 : 1 and, at the time when the transmission request from the internal terminal 22 is received by the call exchange device 20, the fact that call connection request is being conducted by the inner terminal 22 is notified to both functions of the transmission request terminal 21 and the personal computer 10. At the stage where the terminal holding user that has recognized the arrival of the communication has converted the inner terminal 21 into a communication arrival respond state, the communication route of the transmission request terminal 22 is established.

(Explanation of the Action in Examples)

Next, the action in this example for the communications arrival and transmission operation shown in Figures 2, 3 and 4 will be explained in detail by referring to the flow-charts shown in Figures 5, 6 and 7.

Figure 5 shows a flowchart at the time of a commuication by using the personal computer 10. At the time when the information about the fact that such an application as the telephone book, etc. is started up or the number of the other party has been dialed by the keyboard 14 that is connected to the personal computer 10, the call exchange device 20 starts up Step 1 in Figure 5, thereby initiating the process.

When, at step 2, a determination is made as to whether the transmission request is a personal computer 10 or the inner terminal 21, the number analysis in step 3 is carried out when it is the personal computer 10. Regarding the process in the case where the transmis-

sion request is the internal terminal 21, the flow chart shown in Figure 6 is followed.

In step 4, either the presence or absence of terminal information that is linked to the transmission request terminal is determined. If it is present, the action in step 5 is carried out. In its absence, on the other hand, the transmission request from the terminal is processed as usual. If a determination is made in step 4 that there is a linked terminal, the call states at the personal computer 10 and the inner terminal 21 are joined and, subsequent to a call connection request to the transmission request terminal 22, the establishment of a communication route between the inner terminal 21 and the transmission request terminal 22 is effected by the action at step 6.

Figure 6 shows a flow chart at the time when communications are carried out by using the inner terminal 21. By operating the dial face of the inner terminal 21, the number of the other party is inputted. By starting a transmission application which is possessed by said terminal, the information about the other party having carried out a connection operation is notified to the call exchange device 20. At this time, the call exchange device 20 starts up step 1 in Figure 6, thereby initiating the process.

Next, a determination is made by step 2 as to whether the transmission request is the inner terminal 21 or the personal computer 10. In the case where it happens to be an inner terminal 21, the number analysis in step 3 is carried out. If it happens to be the inner terminal 21, the number analysis described in step 3 is carried out. In the case where the transmission request is the personal computer 10, the flow chart shown in Figure 5 is carried out.

In step 4, a determination is made as to either the presence or absence of the terminal information which is linked to the transmission request terminal. In the presence of a terminal information, the action described in step 5 is carried out. In its absence, however, the transmission request is processed as usual. In the case where a determination as to the presence of the terminal information is made, the call states of the inner terminal 21 and the personal computer 10 are joined in step 5 and, subsequent to a call connection request to the transmission request terminal 22, a communication route between the inner terminal 21 and the transmission request terminal 22 is established at step 6.

Figure 7 shows a flow chart at the time of a communication arrival for the user who holds both the personal computer 10 and the inner terminal 21. A communication route is established by the process shown in step 6, subsequent to the transmission operation shown in Figures 5 and 6. After said operation, a determination is made as to the presence or absence of the linkage terminal to the arriving terminal in Figure 7 step 7.

In the event that a determination is made as to the presence of a linkage terminal in step 7, the call states of the inner terminal 21 and the personal computer 10 are joined in step 8. In step 9, a communication route with the inner terminal 22 is established. As the personal computer 10 is notified as to the information on the internal terminal 22 which is the transmitter, it becomes possible to offer such functions as specifying the transmitter user from the number information, for instance.

(Effect of the Invention)

The first effect is the fact that the internal numbers can be managed integrally even in the case where both an internet telephone and an existing inner terminal are held. The reason lies in the fact that it is possible to link two terminals automatically by making reference to the terminal linkage information that has been registered in the call exchange device beforehand at the time of a startup of a communication transmission or arrival time.

The second effect lies in the fact that the freedom at the location of the user can be enhanced by linking the internet telephone and the existing inner terminal. The reason for this lies in the fact that the freedom of the location of the user happens to be low as the internet telephone has had to be connected to such an internet circuit as LAN, etc. By establishing linkage with the cordless terminal as an inner terminal, it becomes possible to initiate communications at a location other than where the internet telephone is set up.

(Other Examples of the Invention)

3-2. This is the same as the explanation for the action in the examples.

(Background of the Invention)

An example of the conventional system is shown in Toku Kai 2000-115354 An Internet Telephone Handset Device and Toku Kai 2002-199026: A Communication Terminal, a Information Processing Equipment Linkage Formula, and a Computer-Readable Memory Medium and Communication System That Has Memorized a Linkage Program.

The internet telephone according to prior art, which acts with such a construction, has had the following problems:

The first problem is that, in the case of an internet telephone using a personal computer, there has been something to be desired as to its confidentiality as the contents of the conversation are outputted from the speaker part of the personal computer. For a solution of this problem, Toku Kai 2000-115354 An Internet Telephone Handset Device raises its confidentiality by connecting a handset which is provided with a hook switch. However, it is not capable of increasing the freedom degree of the user which is an objective of this invention.

The second problem is that, in the case of an internet telephone using a personal computer, it cannot be used as a telephone in the event that the power source of the personal computer is out. Toku Kai 2002-199026: A communication terminal, information processing equipment linkage method, and a memory medium and a communication system capable of read-off with a computer, with a linkage program in memory shows a linkage to personal computers and linkage programs.

In view of the fact that the personal computer links the call connection information from a connected device in the form of the call connection information from the connected device in the form of a relay into the existing terminal, the linkage which is an object of said patent cannot be realized in the case where the power source of the personal computer is not on.

(Scope of the Right)

(1) The fact that the functions of a personal computer which is equipped with the function of an internet telephone and the existing inner telephone are provided.

(2) It has the function of confirming the presence or

absence of a terminal that links the transmission terminal at the time of a transmission operation.

(3) It has the function of confirming the presence or absence of a terminal that links with the transmission terminal at the time of a communication arrival.

(Search System in Independent Search Prior to the Notification)

IIPtel + IPPhone + IP Telephone + PC Telephone)*(PC +Personal Computer + Personal Computer)

(Internet Telephone) * (PC + Personal Computer + Personal Computer)

(Laid-Open, Publication or Patent Number Believed to be Related to this Invention)

Toku Kai 2000-115354: Internet Telephone Handset Device

Toku Kai 2002-199026: A Communication Terminal, An Information Processing Equipment Linkage System, and a Memory Medium and a Communications System Capable of Computer Readoff That Memorizes Linkage Programs

(Key Words for Search)

Figure 1:

11. Sound Input and Output
12. Communication
13. Control Software

a. LAN, etc.
b. Personal Computer

13. Control software
14. Keyboard
12. Communication I/F
 a. State of communication
 b. Transmission operation
21. Sound input Output

Figure 2

Figure 3

12. Communication I/F
13. Control software
21. Transmission operation
a. Lan, etc.
b. State of communication
c. Terminal.

12. Communication I/F
13. Control software
14. Keyboard
21. Sound in and out
22. Transmission operation
 a. State of communication

Figure 4

Figure 5:

Step 1: Transmission operation
Step 2: Determination of terminal kind
a: Inner terminal
b: Personal computer terminal
Step 3: Analysis of transmitter's number
c: Figure 5
Step 4: Presence or absence of linkage terminal information
d: No
Step 5: Union with the linkage terminal
Step 6: Connection with the other party's terminal

Figure 6

Step 1: Transmission operation

Step 2: Determination of the terminal kind.

a: Personal computer terminal

b: Inner terminal

Step 3: Analysis of the transmitter's Number

Step 4: Presence or absence of information on linkage terminal

c: No

Step 5: Union with the linkeage terminal

Step 6: Connection with the other party's terminal

Figure 7

Step 6: Connection with the other party's terminal

Step 7: Presence or absence of information about the linked terminal

Step 8: Union with the linkage terminal

Step 9: Connection with the other terminal

a. No